

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference CFO17773WO	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/JP 03/15949	International filing date (day/month/year) 12/12/2003	(Earliest) Priority Date (day/month/year) 13/12/2002
Applicant CANON KABUSHIKI KAISHA		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

3

☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/JP 03/15949

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B82B3/00 H01L21/00 C30B29/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C23C B82B H01L C30B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT.

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 309 554 B1 (MASUDA HIDEKI ET AL) 30 October 2001 (2001-10-30) the whole document	1, 14
X	& PATENT ABSTRACTS OF JAPAN vol. 2000, no. 4, 31 August 2000 (2000-08-31) & JP 2000 002392 A (UNIV TOKYO), 7 January 2000 (2000-01-07) cited in the application abstract	1, 14
X	US 6 359 288 B1 (DRESSELHAUS MILDRED S ET AL) 19 March 2002 (2002-03-19) column 4, line 56 -column 5, line 60	1, 14
X	US 5 581 091 A (MOSKOVITS MARTIN ET AL) 3 December 1996 (1996-12-03) figure 1; example 1	1, 14
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

8 April 2004

Date of mailing of the international search report

21/04/2004

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INTERNATIONAL SEARCH REPORT

International Application No.

PCT/JP 03/15949

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/118027 A1 (MARDILOVICH PETER ET AL) 29 August 2002 (2002-08-29) the whole document ----	1,14
X	US 6 185 961 B1 (NGUYEN PAUL P ET AL) 13 February 2001 (2001-02-13) claims 17,18 ----	1,14
X	US 6 231 744 B1 (DRESSELHAUS MILDRED S ET AL) 15 May 2001 (2001-05-15) the whole document -----	1,14

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP 03/15949

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6309554	B1	30-10-2001	JP 3020155 B2 JP 2000001392 A CA 2266803 A1	15-03-2000 07-01-2000 12-12-1999
US 6359288	B1	19-03-2002	US 6231744 B1 WO 9848456 A1	15-05-2001 29-10-1998
US 5581091	A	03-12-1996	NONE	
US 2002118027	A1	29-08-2002	NONE	
US 6185961	B1	13-02-2001	NONE	
US 6231744	B1	15-05-2001	US 6359288 B1 WO 9848456 A1	19-03-2002 29-10-1998